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NW Fisheries
Science Center

Overview of Pacific Coast Groundfish Species, Management, and Fleets

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Outline

- **Overview**
- **Species included in the Groundfish FMP**
- **Fishery components**



**NWFSC -
FRAMD -
PEP**

PFMC

**SWFSC -
FED -
GAT**

**Cape
Mendocino**

Pt. Conception



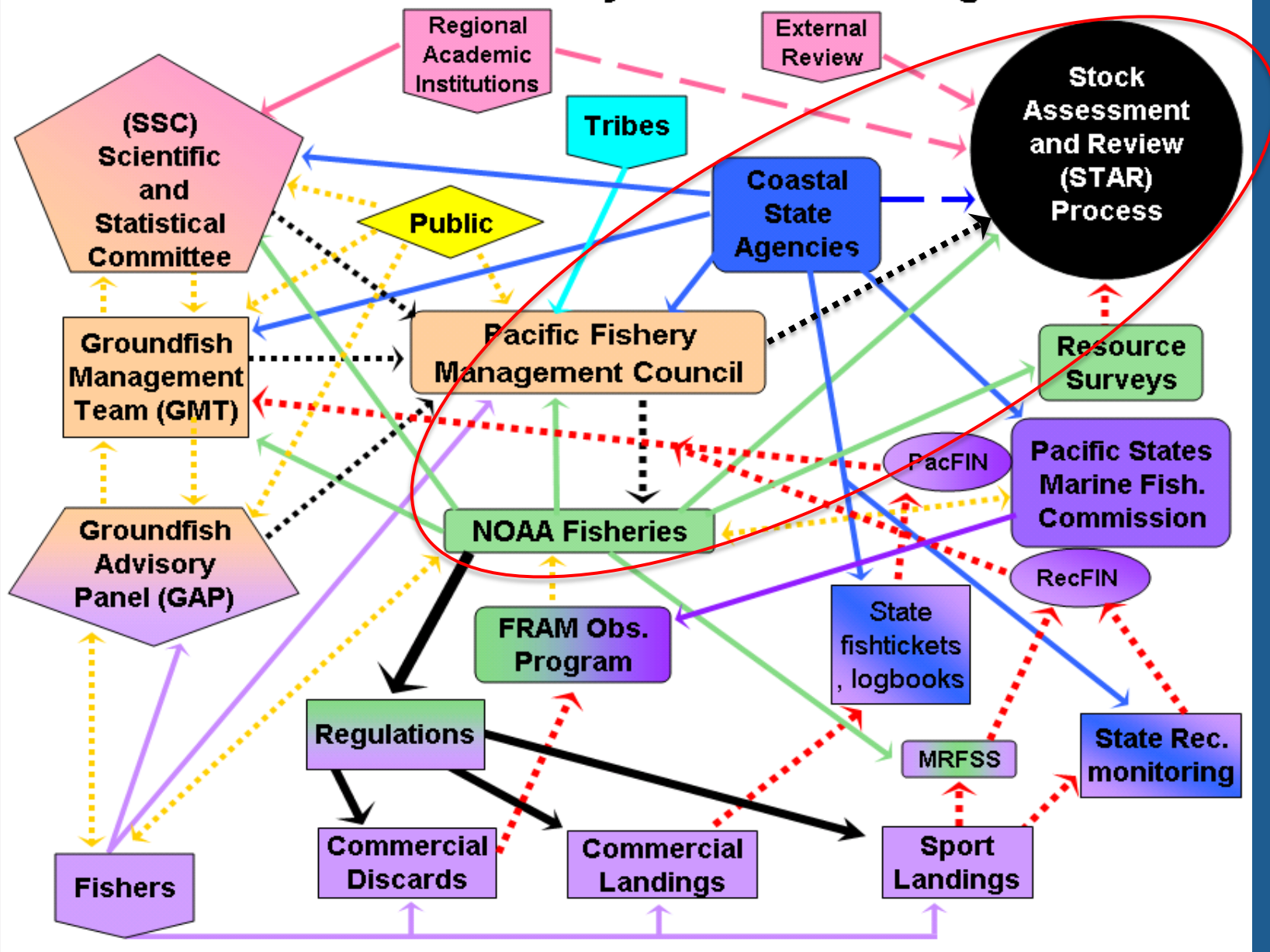
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Overview: Foundations

- Fishery Conservation and Management Act of 1976
 - Over-arching Federal marine fisheries law
 - **200-mile EEZ**
 - Established **Regional Fishery Management Councils**
 - **National Standards**
 - Prevent overfishing while achieving OY
 - Use of 'best available science'
 - 'Americanization' of EEZ fisheries
 - Re-authorized and expanded in 1996 and 2006
- Councils allow for broad stakeholder involvement
- Councils recommend actions to NMFS



You Can't Tell the Players Without a Program



PFMC FMP Has 90+ Groundfish Species

- Over 60 species of **Rockfish**
 - **Slow growing**; can live past 100 years; live-bearing
 - Occupy **diverse habitats**: nearshore kelp forests, rocky reefs, canyons, to depths of more than 250 fm; some are pelagic
- **12 Flatfish** species (e.g. Dover and petrale soles)
 - Occupy mud/gravel substrate; lifespans of 10-30 years
- **6 Roundfish** species (e.g. Pacific hake, sablefish, lingcod)
 - Hake are pelagic, migratory, have highly variable recruitment
 - Sablefish can live 85 years, **high value** to many sectors
- Other species include some sharks, skates, and other fish found from the nearshore to beyond 700 fm



Assorted Rockfish



Dover sole



Lingcod



Sablefish



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Overview: Early Management Highlights

- Three predominant gear groups
 - Trawl (bottom and mid-water), Hook-and-line, Pot
- Effort constrained through vessel landing limits
 - Cumulative-periodic limits by the mid-1990s
- Groundfish Permit program started in 1994
 - Federal licenses with vessel-length & gear endorsements
 - Some 'Open-Access' targeting of groundfish remains
- First species declared overfished in 1999
 - Total of 10 species: 7 rockfish, 2 roundfish, 1 flatfish
 - 3 have been rebuilt; 3 others close
 - Led to dramatic management changes
 - More about those changes in B.1



Three Principal Commercial Gear Groups

- **Trawl**

- Bottom trawls target a wide range of shelf/slope species
- Mid-water trawls target hake; previously some rockfish

- **Hook & Line**

- Bottom longline focus is sablefish; some slope rockfish
- Various line gears used to target nearshore rockfish
 - ‘Live-fish’ fishery emerged in late 1990s

- **Pot**

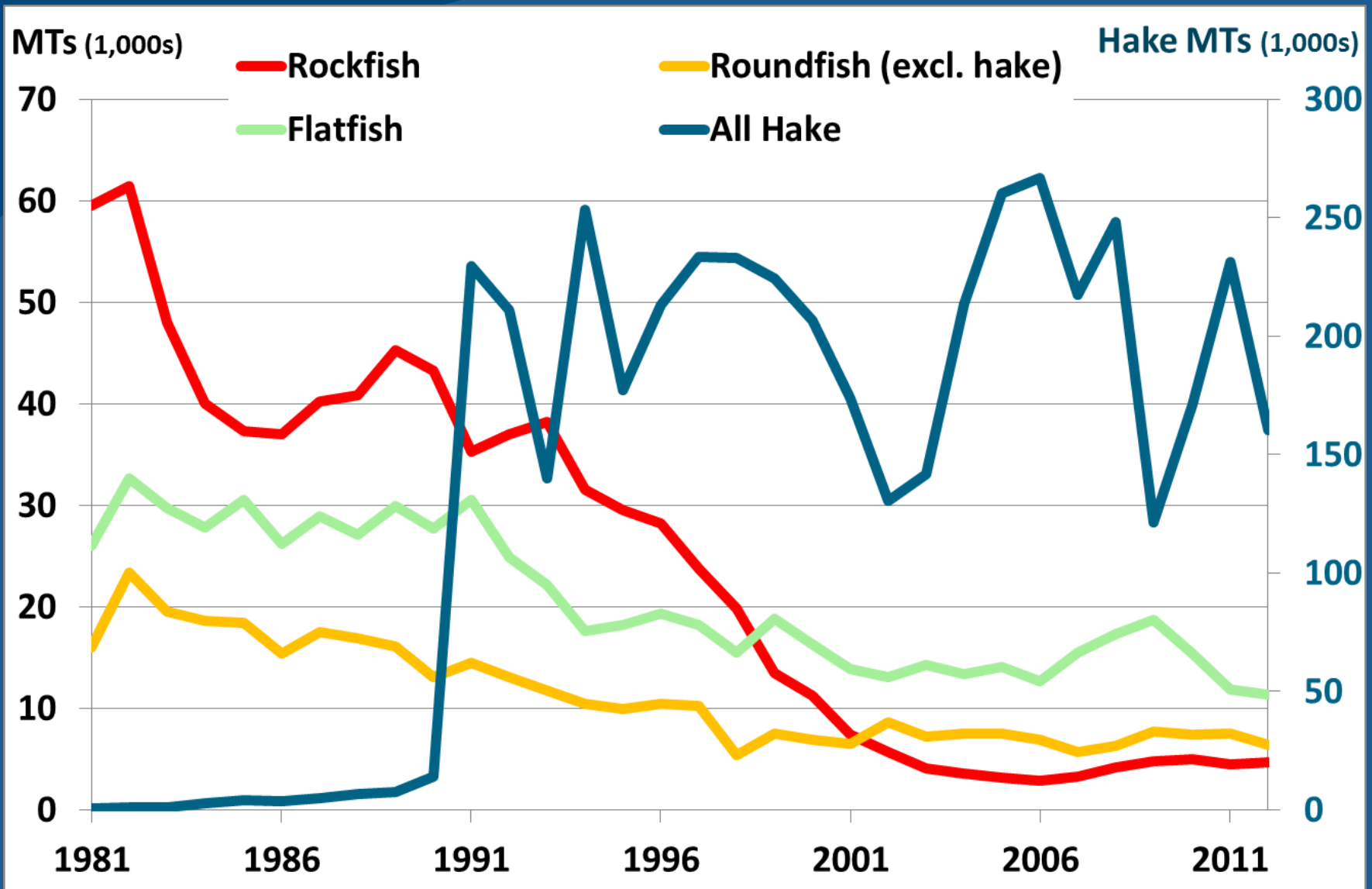
- Major focus is sablefish; some nearshore

- **Minor gears (e.g. set nets, shrimp trawls)**

- Lessening importance under Limited Entry

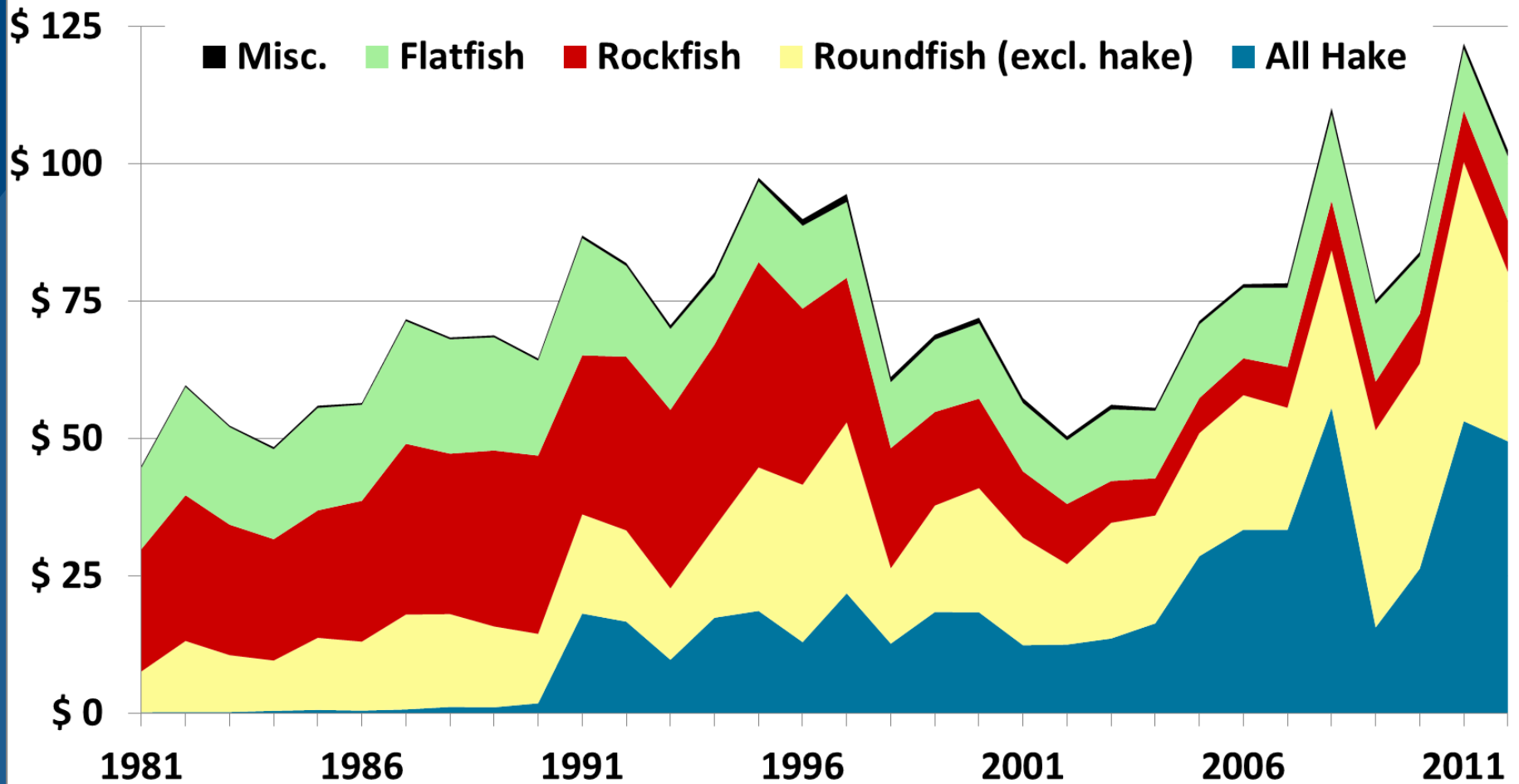


Commercial Landings, by Species Group



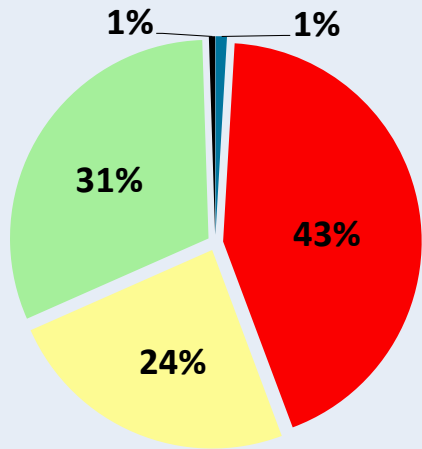
Commercial Ex-vessel Revenue, by Species Group

\$ (millions, nominal)

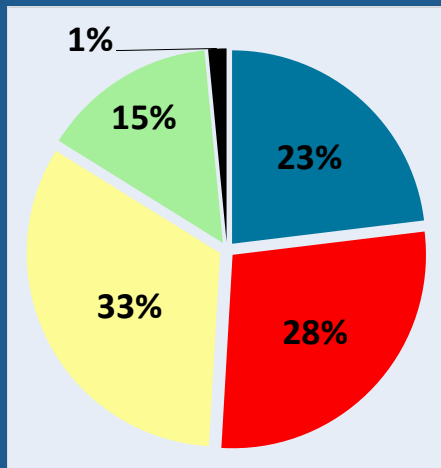


Changes in Species' Revenue Shares

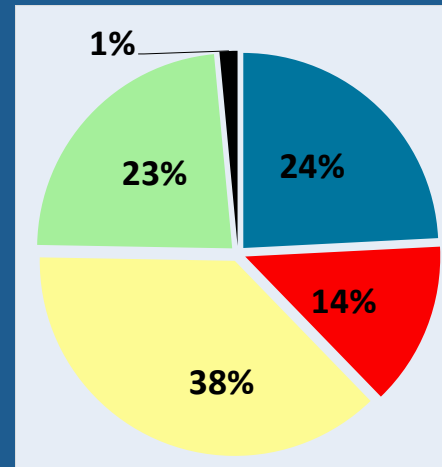
1987



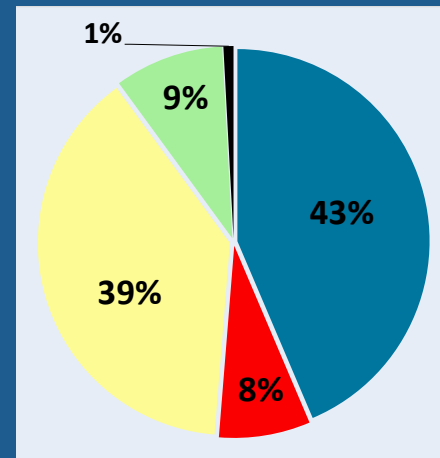
1997



2003



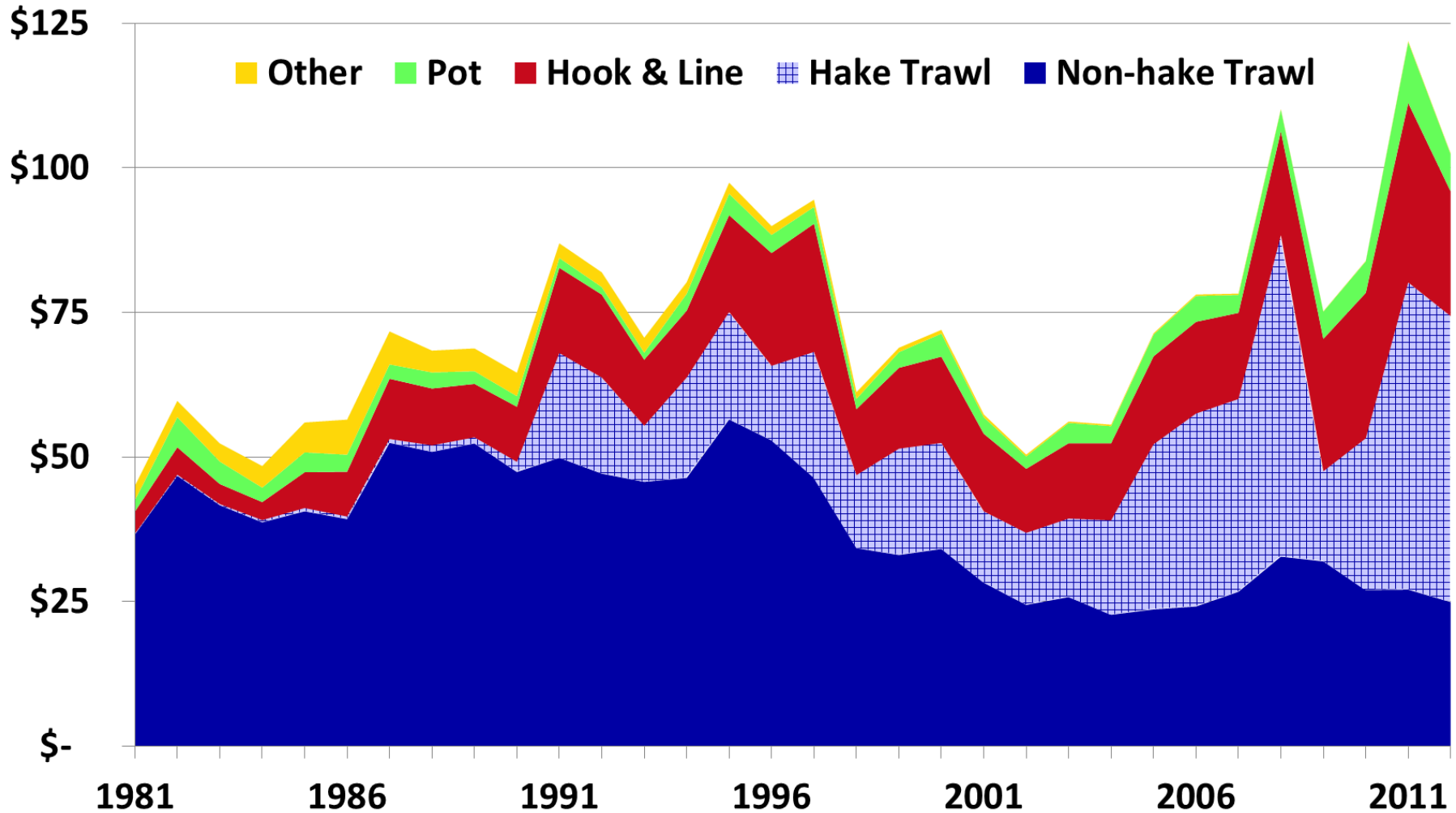
2011



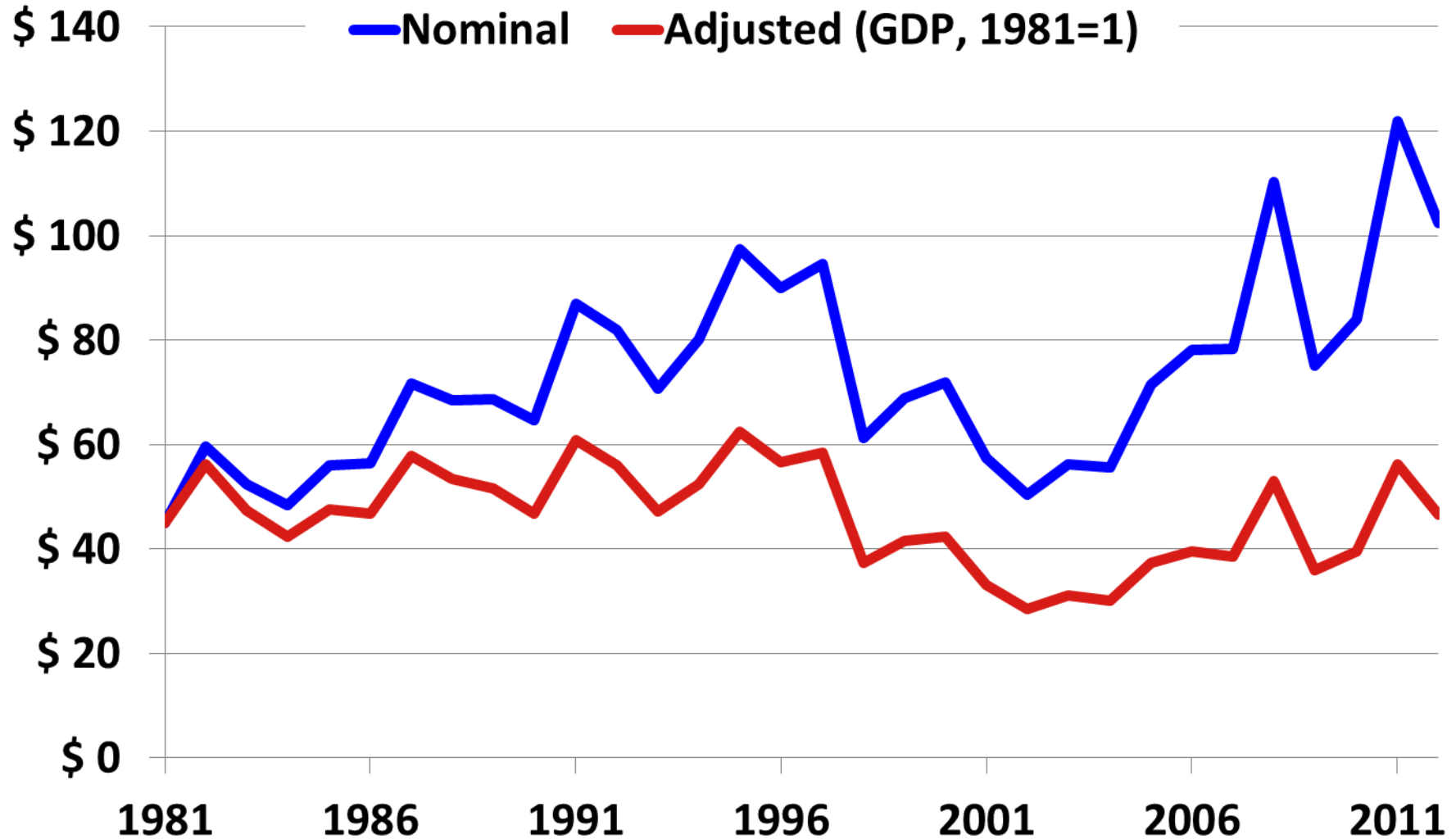
- All Hake
- Roundfish (excl. hake)
- Rockfish
- Flatfish
- Misc.

Commercial Ex-vessel Revenue, by Gear Group

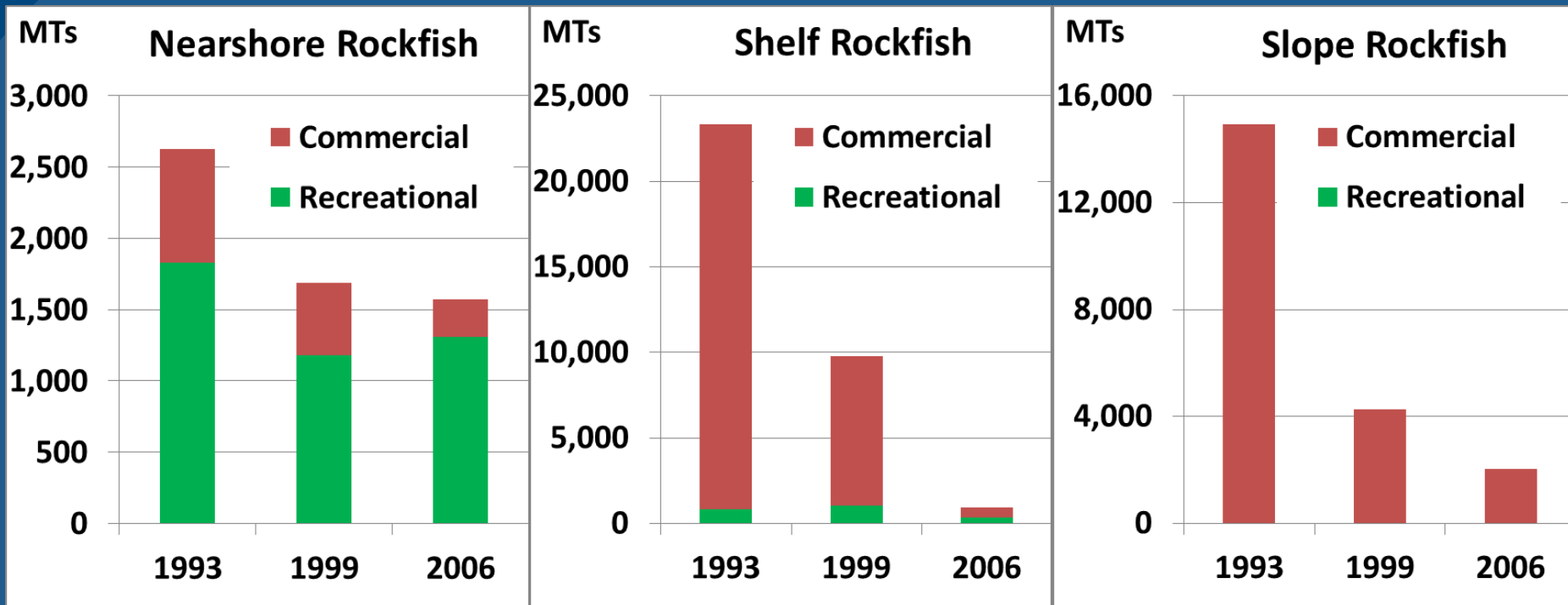
\$ (millions)



Groundfish Ex-vessel Revenue, Nominal/Real



Commercial-Recreational Rockfish Landings



Pacific Hake Changes

- US-Canada Agreement on Pacific Hake/Whiting (2004)
- Implementing legislation delayed until 2009
- First assessment and review conducted under Agreement's terms in 2011
 - However, previous joint assessment efforts
- Hake remains in the PFM Groundfish FMP

